

Resident Radiobiology Course Schedule

Textbook: Radiobiology for the Radiologist: 7th Edition, Hall and Giaccia

**Sessions will be held on Wednesdays from April thru June
4:30 – 6:00 PM in Conference Room 1041 (except highlighted)**

- March 29**
4.30 pm
Room 1202
- Week 1: DNA Damage and Repair (JTR)**
Chapter 1: The Physics and Chemistry of Radiation Absorption
Chapter 2: DNA Strand Breaks and Chromosomal Aberrations
Chapter 3: Cell Survival Curves
Chapter 4: Radiosensitivity and Cell Age in the Mitotic Cycle
Chapter 5: Repair of Radiation Damage and the Dose-Rate Effect
- April 5**
4.30 pm
- Week 2: Modulating Radiation Response through Oxygen and Hyperthermia (Dilling)**
Chapter 6: The Oxygen Effect and Reoxygenation
Chapter 28: Hyperthermia
- April 11**
4.30 pm
- Week 3: Linear Energy Transfer and Relative Biologic Effectiveness (AGO) (4:00PM)**
Chapter 7: Linear Energy Transfer and Relative Biological Effectiveness
- April 19**
4.30 pm
- Week 4: Side Effects of Radiation, Radioprotector and sensitizer (BAP)**
Chapter 8: Acute Effects of Total-Body Irradiation
Chapter 9: Radioprotector
Chapter 10: Radiation Carcinogenesis
- April 26**
4.30 pm
- Week 5: Genetic and hereditary Effects of Radiation (RD)**
Chapter 11: Hereditary Effects of Radiation
Chapter 12: Effects of Radiation on the Embryo and Fetus
Chapter 13: Radiation Cataractogenesis
- May 3**
4.30 pm
- Week 6: Radiation Protection (Noriega)**
Chapter 14: Radiological Terrorism
Chapter 16: Dose and Risks in Diagnostic Radiology/Nuclear Medicine
Chapter 17: Radiation Protection
- May 10**
4.30 pm
- Week 7: Cancer Biology for Clinicians (Kim)**
Chapter 18: Cancer Biology
Chapter 21: Model Tumor Systems
- May 24**
5.00 pm
- Week 8: Retreatment, chemotherapy and alternative modalities, (JJC)**
Chapter 24: Retreatment after Radiotherapy: The Possibilities and the Perils.
Chapter 25: Alternative Radiation Modalities
Chapter 27: Chemotherapeutic Agents from the Perspective of the Radiation Biologist
- May 31**
4.30 pm
- Week 9: Time, Dose, and Fractionation in Radiotherapy (Robinson)**
Chapter 19: Dose Response Relationships for Model Normal Tissues
Chapter 20: Clinical Response of Normal Tissue
Chapter 23: Time, Dose and Fractionation in Radiotherapy